

Interface Message Processor

MIT Museum photos of J.C.R. Licklider

P02

TO:

6172589107

FEB 14 '96 16:01 MIT MUSEUM



1950



1957



1968



circa 1965

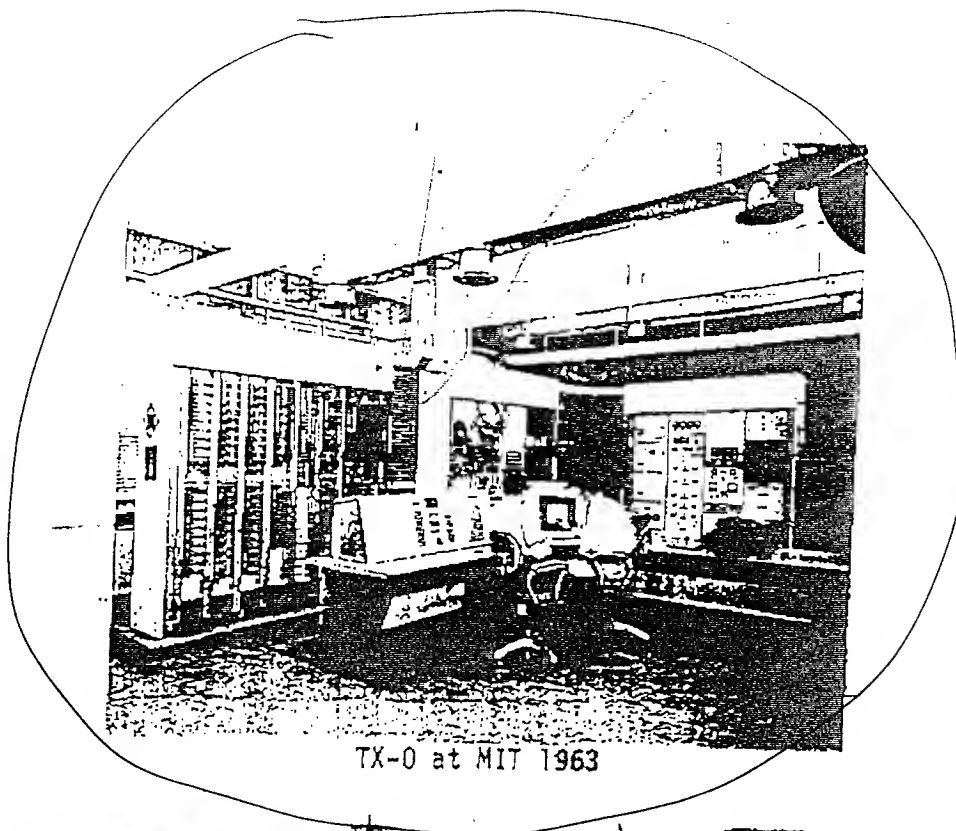


1967



circa ear

Ivan Massar Bla



TX-0 at MIT 1963



Robert Fano and
the Kludge producing
DP1



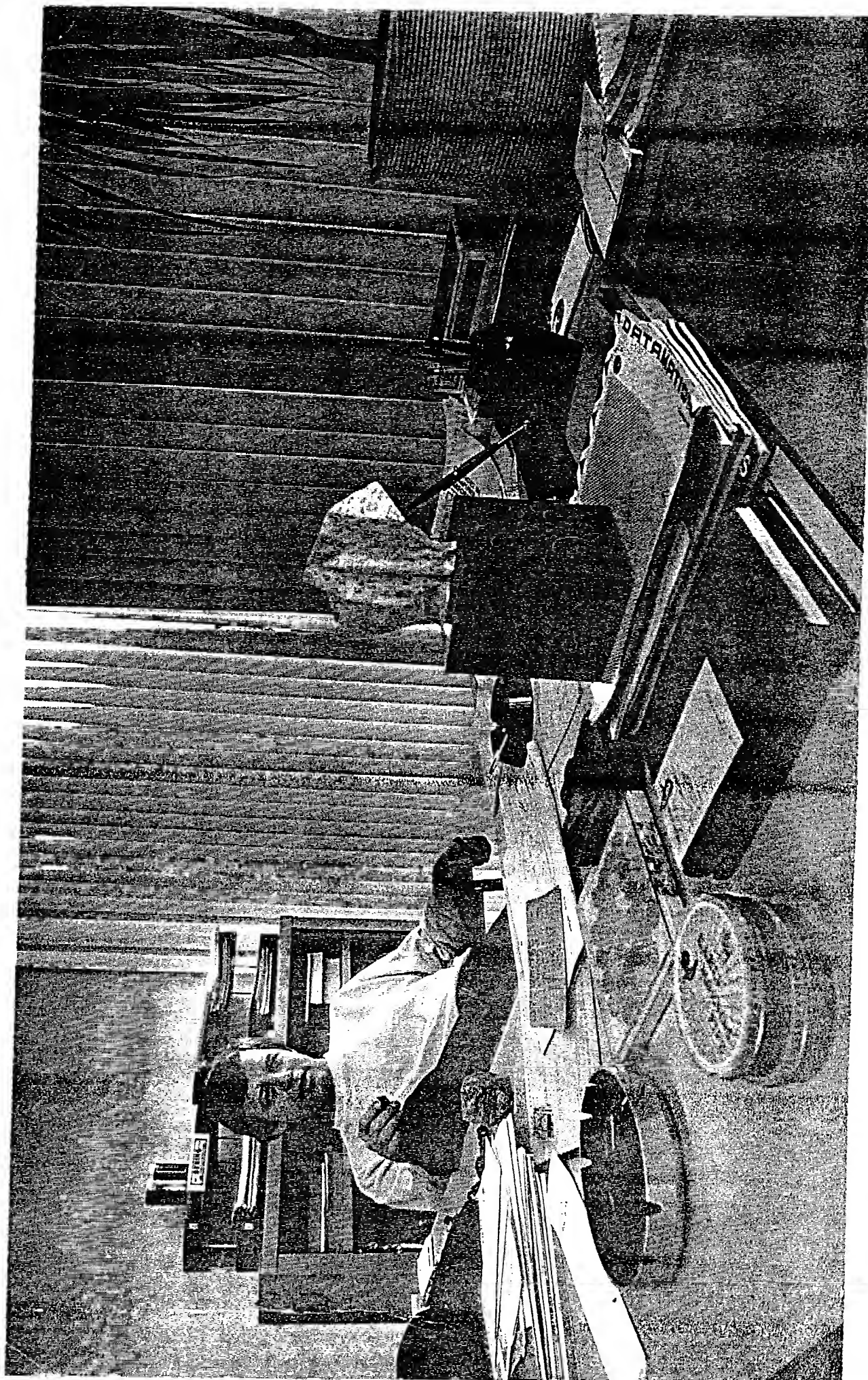
Ivan Sutherland the the TX-2 Sketchpad program
Lincoln Laboratory

KATIE HAFNER

1 512 476 1966

P.01

Taylor



2 PICTURES of ME WITH SAM LABATE, (THEN
BBN PRESIDENT) WITH AN IMP - SOMEONE IN 1969

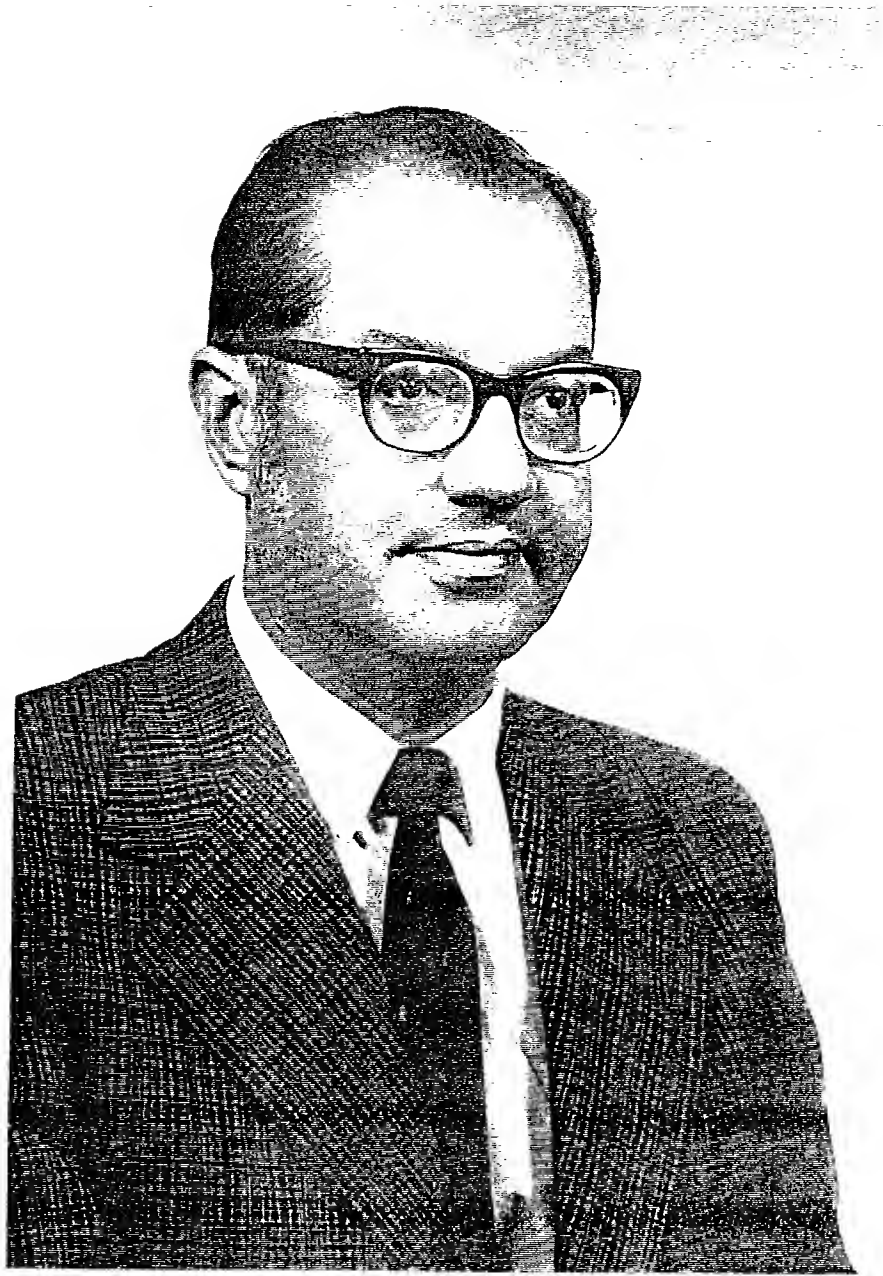
(I SUPPOSE YOU COULD CROP SAM IF YOU DIDN'T
WANT TO INTRODUCE ANOTHER NAME)



Heart?



Heart ?
or Roberts ?



Baran

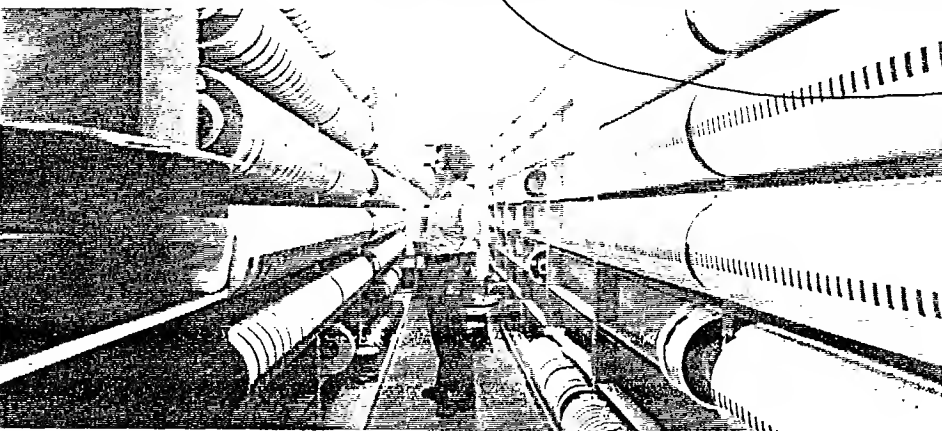
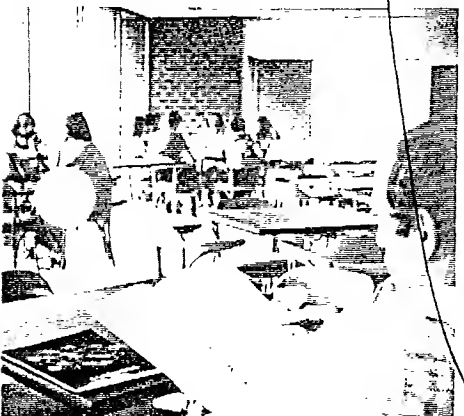
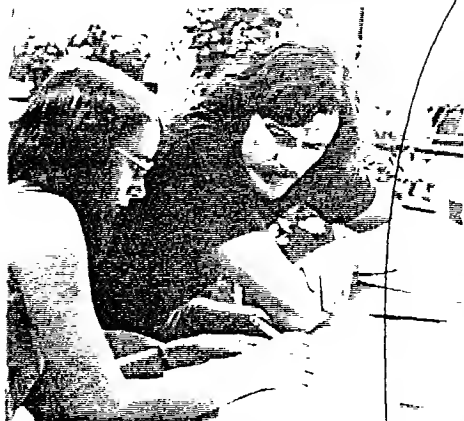


Davis

About BBN

BBN office

replaces Regional
Laundry. NOC was
on 5th floor (4th
row of windows)
in back corner
(furthest from
camera). In this
picture 5th floor
interior construction
not yet started.



Bolt Beranek and Newman Inc. is a company of nearly 750 men and women working together to create and apply technology.

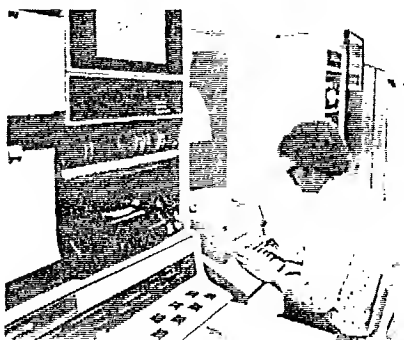
Our business is designed to respond quickly and effectively to our clients' needs for:

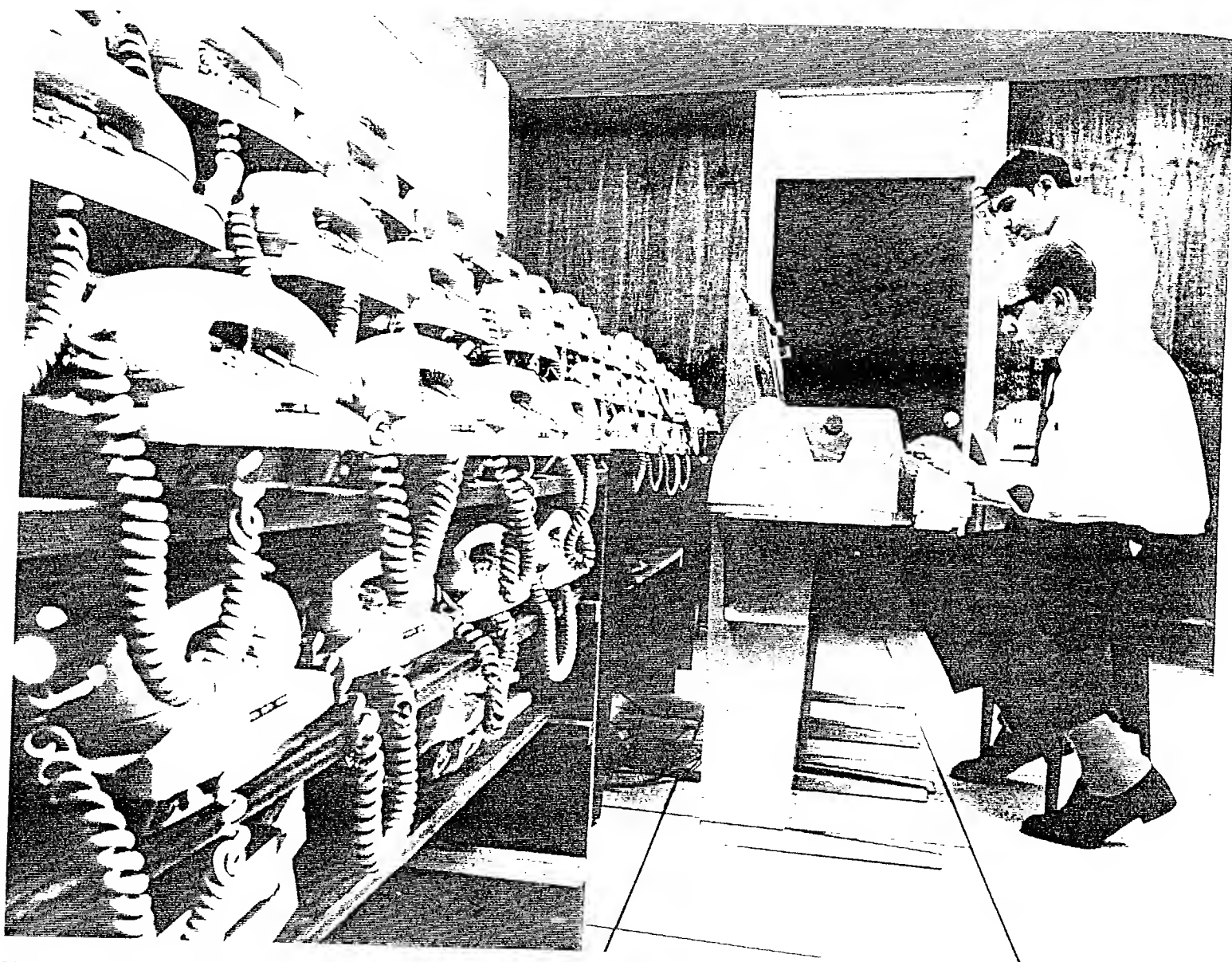
- applied research
- product and systems development
- consulting
- engineering assistance
- technical program management
- specialized commercial products and services.

BBN meets these needs by integrating disciplines in many areas of physical, behavioral, and computer science, engineering, business management, and related professions.

BBN serves a diversity of clients in industry and at all levels of federal, state, and local government. We operate from the metropolitan areas of Boston, Washington, D.C., Chicago, Los Angeles, and Houston.

BBN's new building houses office space for all activities in Information Sciences and Computer Systems as well as specially designed computer facilities and an employee dining room. Located in Cambridge and Boston.





TELCOMP timeshared computer services are carried via ordinary phone lines to offices, schools and research facilities.

BBN Timesharing

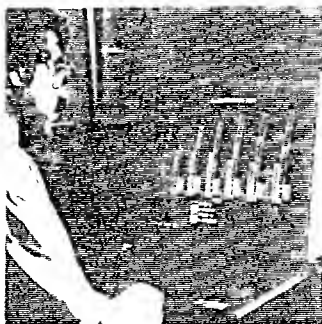
NCC in
second half
of 1970



BBN operates the Network Control Center for the ARPANET.



Computer
state-of-the-art
staff



The RS/I software—BBN's
automated lab notebook.

automated laboratory notebook. RS/I features an English-like command language that enables users with little or no computer experience to store and file data, carry out statistical analyses, and view data in graphic, tabular, or textual form.

Medical and research applications of computers were not the only offspring of BBN's early work in time-sharing. The company developed systems for use in business and commerce and for six years operated Telcomp, one of the earliest commercial time-sharing services.

These activities formed the basis in 1969 for the award of a contract that was to take BBN into yet another major field of technology—packet-switched data communications—a field in which it has continued to make pioneering efforts of a significant nature. Within one year of the award of this contract from the Advanced Research Projects Agency of the Department of Defense, BBN designed, developed, and built a hardware/software system that allowed four geographically separated computers of different makes to communicate with each other. The technique used a dynamic routing process in which individual "packets" of data were transmitted over the fastest available routes in the four-node network, which was interconnected with wide-band telephone lines leased from the Bell System. The dynamic routing process was called packet-switching, and the four-node network rapidly grew into the ARPANET—a network that now includes some 120 computer centers and accommodates thousands of users daily in the United States, Hawaii and Europe. The network was later expanded to include broadcast satellite channels.

1979, when a powerful anti-cancer drug was discovered at the University of California with PROPHET, the drug's discoverer, Dr. Philip Leder, stated: "An average day of laboratory study is often more useful than a year of trial and error in the lab."

The development of the PROPHET system has led to the development of other research information-handling systems that are commercially available. INFO, for example, is a system that allows research investigators store, retrieve, and analyze patient data in written or graphic form. Another software product, RS/I, is a general purpose data-handling tool that serves, in effect, as an

A division scientist, has a B.E.E. from the University of Cambridge, Institute, and M.S. and Sc.D. in electrical engineering from MIT. Dr. Murray's work at BBN encompasses a wide range of activities in noise modeling, prediction, testing, and evaluation of self-noise and radiated noise. His current activities in noise modeling include predicting treatment design, outer boundary design, and test planning and analysis. One of his interests is the response of sensor array boundary layer (TBL) excitation. He has made fundamental measurements of the pressure fluctuations on the hull pressures to the design of sonar applications. A variety of naval applications.

A division scientist, is primarily concerned with the design and development of innovative sonar systems and sound sources, which include performance improvements over existing systems. Mr. Murray works on systems that actively suppress the effects of noise. He is also concerned with the design and instrument systems. He has experience in the vibration of machinery, fans, and wind tunnels. Mr. Murray is a member of Rolls Royce, Ltd. and holds an appointment from Derby, England.

A division scientist, received a B.A. from Kalamazoo College, an S.M. in Mathematics from the University of Pittsburgh, and a Ph.D. in science from MIT. Dr. Sidner's specialties are in discourse processing, collaborative planning and problem solving, and inter-machine interaction that includes the design of models of discourse that include the design of reference, and planning and problem solving. He is currently working on a machine interaction that includes the design of models of discourse that include the design of reference, and planning and problem solving. He is currently working on a machine interaction that includes the design of models of discourse that include the design of reference, and planning and problem solving.

III. PROFILES OF SELECTED BBN SYSTEMS AND TECHNOLOGIES SCIENTISTS

BBN STC staff come to the company with a variety of educational and professional backgrounds. Some staff members have been with the company since its inception forty years ago, while others have just joined; all have in common a keen interest in their fields, a commitment to their work, and an intellectual curiosity that is continually reinforced by the company's strong academic ties. Each year the *SDP Annual Report* profiles a group of BBN STC scientists to illustrate the diversity and richness of our staff.

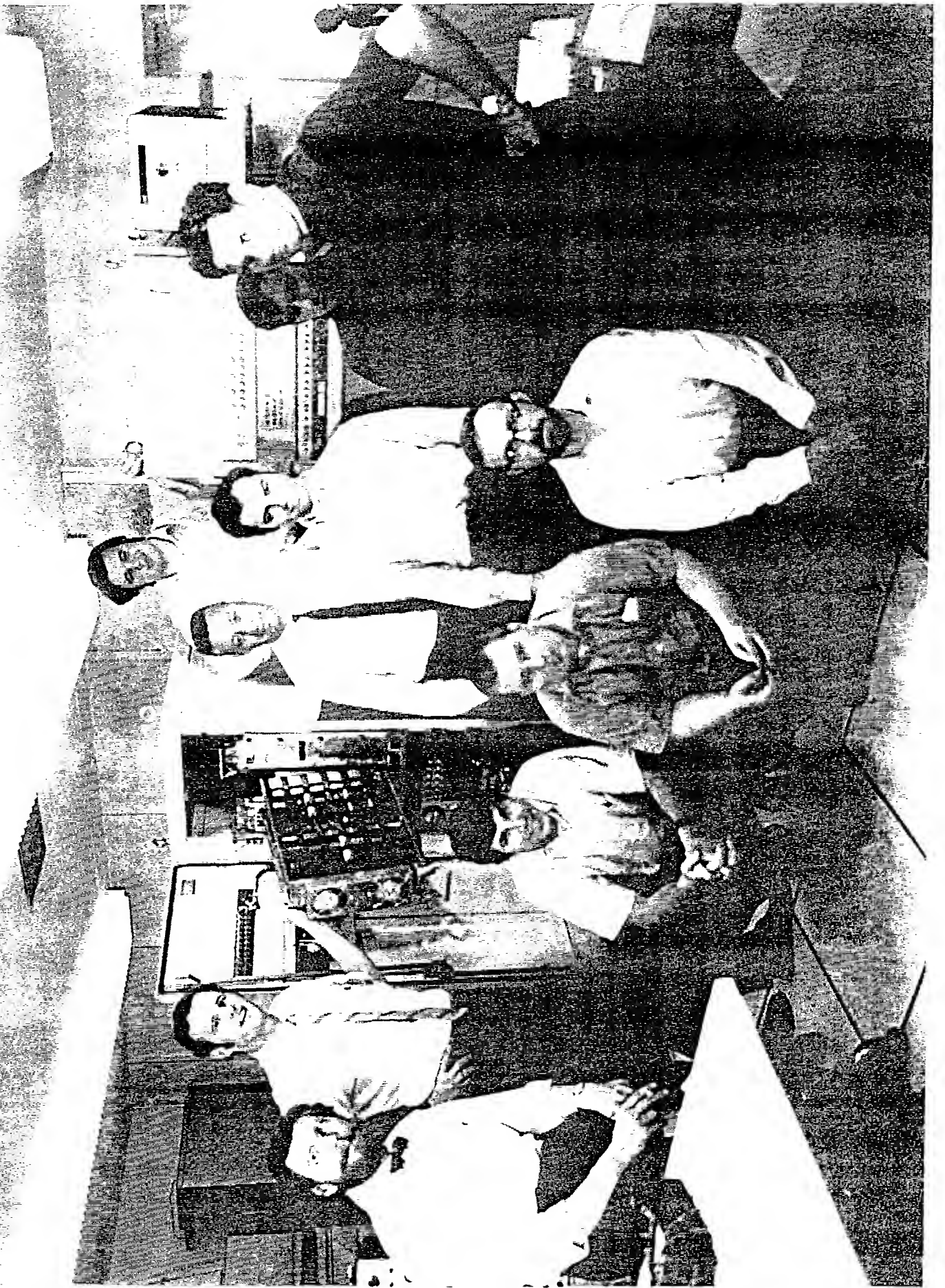


William Crowther — Principal Engineer

"I have spent my life," Will Crowther once wrote in his curriculum vitae, "making computers do unexpected things. I find this immensely satisfying." A principal engineer in the Laboratories Division, Will has been a major contributor to the design and implementation of the ARPANET (the Advanced Research Projects Agency Network) and BBN's ButterflyTM and Monarch parallel processors. He was instrumental in designing the Pluribus³ multi-processor, the forerunner of the Butterfly and the Monarch machines, and contributed to the early design of the SIMNET training system.

A mathematician by training, Will uses math to figure out what software programs will do and how well they will do it. He says he has always had a predilection for pragmatic math — the kind that "makes things happen," not the theoretical kind used in proofs and theorems. Will first used computers as an undergraduate in MIT's physics department. The physics department had computers; the math department did not, he explains.

From MIT, Will went to MIT's Lincoln Laboratory, where he met Frank Heart, now director of the Laboratories Division in BBN STC, and Dave Walden, now president of BBN STC. His favorite project there was the Lincoln Experimental Terminal (LET), a mobile satellite communications system housed in two trailers. The trailers could use virtually any remote object, including the moon, as a surface off which to bounce communications signals. Will designed and implemented the software for small computers that aimed the trailers' six-foot dish antennas, made error corrections on the returning signals, and compressed voice signals for digital transmission.



THE CREATORS

Internet to life.

